Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) An electrolytic membrane structure for a fuel cell, comprising:

an electrolytic membrane placed between an electrode in an anode side and an electrode in a cathode side;

a catalyst layer formed by closing up conductive particles carrying catalysts on each face, in the anode side and in the cathode side, of the electrolytic membrane, the each face contacts to each of the electrodes; and

a boundary layer which is adjacent to the catalyst layer in the anode side on one face of the electrolytic membrane, is formed between a portion to be easily contacted with an oxygen gas and the catalyst layer in the anode side, wherein the boundary layer is formed by closing up the conductive particles carrying the catalysts, as well as a catalyst-carrying amount in the boundary layer is smaller than a catalyst-carrying amount in the catalyst layer.

2. (Withdrawn) The electrolytic membrane structure for the fuel cell as defined in claim 1, wherein

the boundary layer is formed so as to surround a periphery of the catalyst layer, where is easily contacted with the oxygen gas.

3. (Withdrawn) The electrolytic membrane structure for the fuel cell as defined in claim 1, wherein

the boundary layer is formed between a portion in the vicinity of a penetrating passage by which the oxygen gas is supplied to the cathode side which is easily contacted with the oxygen gas, and the catalyst layer.

4. (Withdrawn) The electrolytic membrane structure for the fuel cell as defined in claim 1, wherein

an air gap rate between the conductive particles in the boundary layer is smaller than an air gap rate between the conductive particles in the catalyst layer.

5. (Withdrawn) The electrolytic membrane structure for the fuel cell as defined in claim 1, wherein

a particle diameter of the conductive particles in the boundary layer is smaller than a particle diameter of the conductive particles in the catalyst layer.

6. (Withdrawn) The electrolytic membrane structure for the fuel cell as defined in claim 1, wherein

a hydrophilic treatment is carried out to the conductive particles in the boundary layer.

7. (Withdrawn) A fuel cell with an electrolytic membrane placed between an electrode in an anode side and an electrode in a cathode side, comprising:

a catalyst layer in the anode side and in the cathode side formed on either a face of the electrolytic membrane or a face of the electrode, which is a contacting face between the electrolytic membrane(1) and the each electrode and formed by closing up conductive particles carrying catalysts; and

a boundary layer which is adjacent to the catalyst layer in the anode side on one face of the electrolytic membrane or the electrode and is formed between a portion to be easily contacted with an oxygen gas and the catalyst layer in the anode side, wherein the boundary layer is formed by closing up the conductive particles carrying the catalysts, as well as a catalyst-carrying amount in the boundary layer is smaller than a catalyst-carrying amount in the catalyst layer.

8. (Currently amended) An electrolytic membrane structure for a fuel cell, comprising:

an electrolytic membrane placed between an electrode in an anode side and an electrode in a cathode side;

a catalyst layer formed by closing up conductive particles adhered together carrying catalysts on each face, in the anode side and in the cathode side, of the electrolytic membrane, the each face contacts to each of the electrodes; and

a boundary layer which is adjacent to the catalyst layer in the anode side on one face of the electrolytic membrane and is formed between a portion to be easily contacted with an oxygen gas and the catalyst layer in the anode side, wherein the boundary layer is formed by closing up the conductive particles adhered together to which a hydrophilic treatment is carried out, such that the hydrophilic characteristics of the conductive particles of the boundary layer are higher than that of the catalyst layer.

9. (Original) The electrolytic membrane structure for the fuel cell as defined in claim 8, wherein

the boundary layer is formed so as to surround a periphery of the catalyst layer, where is easily contacted with the oxygen gas.

10. (Original) The electrolytic membrane structure for the fuel cell as defined in claim 8, wherein

the boundary layer is formed between a portion in the vicinity of a penetrating passage by which the oxygen gas is supplied to the cathode side which is easily contacted with the oxygen gas, and the catalyst layer.

11. (Withdrawn) The electrolytic membrane structure for the fuel cell as defined in claim 8, wherein

an air gap rate between the conductive particles in the boundary layer is smaller than an air gap rate between the conductive particles in the catalyst layer.

12. (Withdrawn) The electrolytic membrane structure for the fuel cell as defined in claim 8, wherein

a particle diameter of the conductive particles in the boundary layer is smaller than a particle diameter of the conductive particles in the catalyst layer.

13. (Currently amended) A fuel cell with an electrolytic membrane placed between an electrode in an anode side and an electrode in a cathode side, comprising:

a catalyst layer in the anode side and in the cathode side formed on either a face of the electrolytic membrane or a face of the electrode, which is a contacting face between the electrolytic ~~membrane(1)~~ membrane and the each electrode, wherein the catalyst layer is formed by closing up conductive particles adhered together carrying catalysts; and

a boundary layer which is adjacent to the catalyst layer in the anode side on one face of the electrolytic membrane or the electrode, is formed between a portion to be easily contacted with an oxygen gas and the catalyst layer in the anode side, wherein the boundary layer is formed by closing up the conductive particles adhered together to which a hydrophilic treatment is carried out, such that the hydrophilic characteristics of the conductive particles of the boundary layer are higher than that of the catalyst layer.